

1590. (Amended) The array of claim 1589, wherein said surface treatment agent is selected from the group consisting of an amine providing compound, an epoxy glue or solution and an acid solution.

1591. (Amended) The array of claim 1590, wherein said amine providing compound comprises an amino-substituted hydrophobic polymer.

1592. (Amended) The array of claim 1590, wherein said amine providing compound is selected from the group consisting of dodecadiamine (DDA), polylysine (PPL), γ -aminopropyltriethoxysilane, ammonium acetate, epoxy glue or solution, and a combination of any of the foregoing.

1593. (Amended) The array of claim 1590, wherein said amine providing compound comprises polylysine (PPL).

1594. (Amended) The array of claim 1589, wherein said surface treatment agent comprises an epoxy glue or solution.

1595. (Amended) The array of claim 1576, wherein said reactive groups or binding sites comprise one or more amine, polyamine, amino-substituted or amino-derivatized groups thereon.

1597. (Amended) The array of claim 1596, wherein said surface treatment agent is selected from the group consisting of dodecadiamine (DDA), polylysine (PPL), γ -aminopropyltriethoxysilane, ammonium acetate, epoxy glue or solution and a combination of any of the foregoing.

1670. (Amended) An array comprising a non-porous substrate having surfaces, each surface comprising at least one nucleic acid strand fixed or immobilized to one or more reactive groups or binding sites on said surface, wherein at least one nucleic acid strand or a sequence therefrom in one of said surfaces is different from at least one other nucleic acid strand or a sequence therefrom in another surface, and wherein said non-porous substrate comprises siliceous matter or polymeric material.

1684. (Amended) The array of claim 1683, wherein said surface treatment agent is selected from the group consisting of an amine providing compound, an epoxy glue or solution and an acid solution.

1685. (Amended) The array of claim 1684, wherein said amine providing compound comprises an amino-substituted hydrophobic polymer.

1686. (Amended) The array of claim 1684, wherein said amine providing compound is selected from the group consisting of dodecadiamine (DDA), polylysine (PPL), γ -aminopropyltriethoxysilane, ammonium acetate, epoxy glue or solution and a combination of any of the foregoing.

1687. (Amended) The array of claim 1686, wherein said amine providing compound comprises polylysine (PPL).

1688. (Amended) The array of claim 1683, wherein said surface treatment agent comprises an epoxy glue or solution.

1689. (Amended) The array of claim 1670, wherein said reactive groups or binding sites comprise one or more amine, polyamine, amino-substituted or amino-derivatized groups thereon.

1691. (Amended) The array of claim 1690, wherein said surface treatment agent is selected from the group consisting of dodecadiamine (DDA), polylysine (PPL), γ -aminopropyltriethoxysilane, ammonium acetate, epoxy glue or solution and a combination of any of the foregoing.

1777. (Amended) The system of claim 1776, wherein said surface treatment agent is selected from the group consisting of an amine providing compound, an epoxy glue or solution and an acid solution.

1778. (Amended) The system of claim 1777, wherein said amine providing compound comprises an amino-substituted hydrophobic polymer.

1779. (Amended) The system of claim 1777, wherein said amine providing compound is selected from the group consisting of dodecadiamine (DDA), polylysine (PPL), γ -aminopropyltriethoxysilane, ammonium acetate, epoxy glue or solution, and a combination of any of the foregoing.

1780. (Amended) The system of claim 1777, wherein said amine providing compound comprises polylysine (PPL).

1781. (Amended) The system of claim 1776, wherein said surface treatment agent comprises an epoxy glue or solution.

1782. (Amended) The system of claim 1762, wherein said activated surface comprises one or more amine, polyamine, amino-substituted or amino-derivatized groups thereon.

1783. (Amended) The system of claim 1782, wherein said amine, polyamine, amino-substituted or amino-derivatized group or groups result from a treatment of said activated surface with a surface treatment agent.

1784. (Amended) The system of claim 1783, wherein said surface treatment agent is selected from the group consisting of dodecadiamine (DDA), polylysine (PPL), γ -aminopropyltriethoxysilane, ammonium acetate, epoxy glue or solution and a combination of any of the foregoing.

1874. (Amended) The system of claim 1873, wherein said surface treatment agent is selected from the group consisting of an amine providing compound, an epoxy glue or solution and an acid solution.

1875. (Amended) The system of claim 1874, wherein said amine providing compound comprises an amino-substituted hydrophobic polymer.

1876. (Amended) The system of claim 1874, wherein said amine providing compound is selected from the group consisting of dodecadiamine (DDA), polylysine (PPL), γ -aminopropyltriethoxysilane, ammonium acetate, epoxy glue or solution and a combination of any of the foregoing.

1877. (Amended) The system of claim 1874, wherein said amine providing compound comprises polylysine (PPL).

1878. (Amended) The system of claim 1873, wherein said surface treatment agent comprises an epoxy glue or solution.

1879. (Amended) The system of claim 1859, wherein said activated surface comprises one or more amine, polyamine, amino-substituted or amino-derivatized groups thereon.

1880. (Amended) The system of claim 1879, wherein said amine, polyamine, amino-substituted or amino-derivatized group or groups result from a treatment of said activated surface with a surface treatment agent.

1881. (Amended) The system of claim 1880, wherein said surface treatment agent is selected from the group consisting of dodecadiamine (DDA), polylysine (PPL), γ -aminopropyltriethoxysilane, ammonium acetate, epoxy glue or solution and a combination of any of the foregoing.

1953. (Amended) A non-porous system which comprises:

a non-porous solid support comprising a surface which comprises one or more amine or polyamine or amino-derivatized or amino-substituted groups thereon; and

at least one double-stranded nucleic acid strand or sequence fixed or immobilized to said solid support surface covalently or non-covalently through said amine or polyamine or amino-derivatized or amino-substituted group or groups, wherein said at least one nucleic acid strand or sequence comprises one or more non-radioactive chemical labels which comprise a non-radioactive signaling moiety or moieties which are quantifiable or detectable.

1968. (Amended) The system of claim 1967, wherein said surface treatment agent is selected from the group consisting of an amine providing compound, an epoxy glue or solution and an acid solution.

1969. (Amended) The system of claim 1968, wherein said amine providing compound comprises an amino-substituted hydrophobic polymer.

1970. (Amended) The system of claim 1968, wherein said amine providing compound is selected from the group consisting of dodecadiamine (DDA), polylysine (PPL), γ -aminopropyltriethoxysilane, ammonium acetate, epoxy glue or solution, and a combination of any of the foregoing.

1971. (Amended) The system of claim 1968, wherein said amine providing compound comprises polylysine (PPL).

1972. (Amended) The system of claim 1967, wherein said surface treatment agent comprises an epoxy glue or solution.

1973. (Amended) The system of claim 1953, wherein said amine, polyamine, amino-substituted or amino-derivatized group or groups result from a treatment of said surface with a surface treatment agent.

1974. (Amended) The system of claim 1973, wherein said surface treatment agent is selected from the group consisting of dodecadiamine (DDA), polylysine (PPL), γ -aminopropyltriethoxysilane, ammonium acetate, epoxy glue or solution and a combination of any of the foregoing.

2049. (Amended) A non-porous system which comprises:

a non-porous solid support comprising a surface which comprises one or more amine or polyamine or amino-derivatized or amino-substituted groups thereon; and

at least one single-stranded nucleic acid strand or sequence fixed or immobilized to said solid support surface covalently or non-covalently through said amine or polyamine or amino-derivatized or amino-substituted group or groups.

2064. (Amended) The system of claim 2063, wherein said surface treatment agent is selected from the group consisting of an amine providing compound, an epoxy glue or solution and an acid solution.

2065. (Amended) The system of claim 2064, wherein said amine providing compound comprises an amino-substituted hydrophobic polymer.

2066. (Amended) The system of claim 2064, wherein said amine providing compound is selected from the group consisting of duodecadiamine (DDA), polylysine (PPL), γ -aminopropyltriethoxysilane, ammonium acetate, epoxy glue or solution and a combination of any of the foregoing.

2067. (Amended) The system of claim 2064, wherein said amine providing compound comprises polylysine (PPL).

2068. (Amended) The system of claim 2063, wherein said surface treatment agent comprises an epoxy glue or solution.

2069. (Amended) The system of claim 2049, wherein said amine, polyamine, amino-substituted or amino-derivatized group or groups result from a treatment of said surface with a surface treatment agent.

2070. (Amended) The system of claim 2069, wherein said surface treatment agent is selected from the group consisting of dodecadiamine (DDA), polylysine (PPL), γ -aminopropyltriethoxysilane, ammonium acetate, epoxy glue or solution and a combination of any of the foregoing.

Add new claims 2143-2160 as follows:

-- 2143. (NEW) The array of claim 1576, wherein said one or more reactive groups or binding sites have been provided by a coating solution. --

-- 2144. (NEW) The array of claim 1590, wherein said surface treatment agent comprises an acid solution. --

-- 2145. (NEW) The array of claim 2144, wherein said acid solution exposes a hydroxyl group or hydroxyl groups on said surface. --

-- 2146. (NEW) The array of claim 1670, wherein said one or more reactive groups or binding sites have been provided by a coating solution. --

-- 2147. (NEW) The array of claim 1684, wherein said surface treatment agent comprises an acid solution. --

-- 2148. (NEW) The array of claim 2147, wherein said acid solution exposes a hydroxyl group or hydroxyl groups on said surface. --

-- 2149. (NEW) The system of claim 1762, wherein said activated surface has been provided by a coating solution. --

-- 2150. (NEW) The system of claim 1777, wherein said surface treatment agent comprises an acid solution. --

-- 2151. (NEW) The system of claim 2150, wherein said acid solution exposes a hydroxyl group or hydroxyl groups on said surface. --

-- 2152. (NEW) The system of claim 1859, wherein said activated surface has been provided by a coating solution. --

-- 2153. (NEW) The system of claim 1874, wherein said surface treatment agent comprises an acid solution. --

-- 2154. (NEW) The system of claim 2153, wherein said acid solution exposes a hydroxyl group or hydroxyl groups on said surface. --

-- 2155. (NEW) The system of claim 1953, wherein said one or more amine or polyamine or amino-derivatized or amino-substituted groups have been provided by a coating solution. --

-- 2156. (NEW) The system of claim 1968, wherein said surface treatment agent comprises an acid solution. --

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-- 2157. (NEW) The system of claim 2156, wherein said acid solution exposes a hydroxyl group or hydroxyl groups on said surface. --

-- 2158. (NEW) The system of claim 2049, wherein said one or more amine or polyamine or amino-derivatized or amino-substituted groups have been provided by a coating solution. --

-- 2159. (NEW) The system of claim 2064, wherein said surface treatment agent comprises an acid solution. --

-- 2160. (NEW) The system of claim 2159, wherein said acid solution exposes a hydroxyl group or hydroxyl groups on said surface. --

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